UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,588	10/23/2001	Michael Kenneth Brown	401052-A-01-US(Brown)	6479

7590	05/17/2004

John C. Moran, Attorney, P.C.
4120 E. 115th Place
Thornton, CO 80233

EXAMINER
PHAN, JOSEPH T

ART UNIT	PAPER NUMBER
2645	

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/037,588	BROWN ET AL.
	Examiner	Art Unit
	Joseph T Phan	2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 March 2004_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19, 21-29 and 31_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-19, 21-29, and 31_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.　　The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 17 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 lines 6-8 and claim 17 lines 9-12 recite the newly added limitation of "analyzing using automatic speech recognition...the received audio information for tones..." Applicant's specification teaches that an Automatic Speech Recognition <u>Unit</u> includes a tone detector to perform detection of tones(page 17 line 12-page 18 line 18) and not specifically using 'speech recognition' analysis to perform the detection of tones. 'Speech recognition' is used specifically for recognizing and interpreting words, phrases, etc. in speech as described in applicant's specification (page 12 line 10-page 13 line 18). Applicant's specification does not enable and disclose how using speech recognition analysis(eg. Hidden Markov Model) is able to analyze tones, applicant's 'tone detector' within a speech recognition <u>unit</u> enables the analysis(page 17 line 12-page 18 line 18). It is noted that the method for recognizing tones is different than for recognizing speech in speech recognition therefore 'using speech recognition to detect

tones' is contradictory.

For clarification, Examiner recommends the reciting the phrase to "..analyzing using automatic speech or tone recognition the received audio information..." or revise the claim language similar to claim 27.

Appropriate clarification or correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 11, 17-21, and 27-30 rejected under 35 U.S.C. 102(b) as being anticipated by Solot, Patent #5,644,625.

Regarding claims 1 and 17 Solot teaches a method for doing call classification on a call to a destination endpoint, comprising the steps of:

receiving audio information from the destination endpoint(col.2 lines 3-19) and analyzing using speech recognition the received audio information for a first and second type of classification wherein the second type is for detecting tones(col.5 lines 31-62) and determining a call classification for the destination endpoint in response to the analysis of the first type of classification and the analysis of the second type of classification (col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 2 and 18, Solot teaches the method of claims 1 and 17 wherein the analysis for the first type of classification is analyzing the audio information for words (col.2 lines 3-19 and col.6 lines 1-36; one number announced is a word)

Regarding claim 3 and 19, Solot teaches the method of claims 2 and 18 wherein the analyzed words are formed as phrases words (col.2 lines 3-19 and col.6 lines 1-36; the telephone number is a phrase).

Regarding claims 4 and 20 Solot teaches the method of claims 2 and 18 wherein the analysis for the second type of classification is analyzing the audio information for tones (col.5 lines 1-4 and 31-62)

Regarding claims 5 and 21 Solot teaches the method of claims 4 and 18 wherein the step of receiving audio information further comprises detecting speech or tones in the audio information(col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claim 11 Solot teaches a method for doing call classification on a call to a destination endpoint, comprising the steps of:
receiving audio information from the destination endpoint(col.2 lines 3-19) and detecting speech or tones in received audio information, analyzing using automatic speech recognition the received audio information for words in response to the detection of speech and analyzing using automatic speech recognition the received audio information for tones in response to the detection of tones (col.5 lines 31-62); determining a call classification for the destination endpoint in response to the analysis of words or the analysis of tones (col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claim 27, Solot teaches a call classifier for determining the call

classification of a called destination endpoint, comprising:

an automatic speech recognizer for detecting first characteristics in audio information

received from the called destination endpoint, the automatic speech recognizer further

detecting tones in the audio information received from the called destination

endpoint(col.5 lines 1-4, 31-62 and col.6 lines 20-25);

and inference engine for classifying the call in response to the automatic speech

recognizer (Fig.1 items 5 and 13 and col.5 lines 31-62; the voice recognition board with

the computer is an inference engine which infers by a confidence level what the word

announced is).

Regarding claim 28, Solot teaches the call classifier of claim 27 wherein the first

characteristics are words (col.2 lines 3-19 and col.6 lines 1-36; one number announced

is a word).

Regarding claim 29, Solot teaches the call classifier of claim 28 wherein the

words are formed into phrases (col.2 lines 3-19 and col.6 lines 1-36; the telephone

number is a phrase).

Regarding claim 30, Solot teaches the call classifier of claim 28 wherein the

second characteristics are tones (col.5 lines 1-4 and 31-62).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10, 12-16, 22-26, and 31 rejected under 35 U.S.C. 103(a) as being

unpatentable over Solot in view of Trandal et al., Patent #6088428.

Regarding claims 6, 8, 12, 14, 22, 24, and 31, Solot teaches the methods and

call classifier of claims 5-6, 11-12, 21-22, and 30 wherein the step of analyzing for the

first and second types of classification is responsive to the detection of speech and/or

tone in the audio information.

Solot is silent on executing a Hidden Markov Model to determine the presence of

words or tones in the audio information.

Trandal, as best understood due to the 112 issues above, discloses using a

Hidden Markov Model to determine the presence of words and/or tones in audio

information (col.8 lines 16-25 and col.23 lines 17-28)

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the to use the Hidden Markov Model as taught by Trandal to determine

the presence of words or tones. One of ordinary skill in the art would have been

motivated to do this because the Hidden Markov Model is a common and well-known

algorithm for recognizing speech as disclosed in Solot's speech recognition system.

Regarding claims 7, 13, and 23, Solot teaches the methods of claims 6, 12, and

22 wherein the step of executing comprises the step of using a grammar for speech

(col.5 lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 9, 15, and 25, Solot teaches the method of claims 8, 14, and

24 wherein the step of executing comprises the step of using a grammar for tones(col.5

lines 1-4, 31-62 and col.6 lines 20-25).

Regarding claims 10, 16, and 26, Solot teaches the method of claims 8, 14, and

24 wherein the step of determining comprises the step of executing an inference engine

(Fig.1 item 13, col.5 lines 1-4, 31-62 and col.6 lines 20-25; the voice recognition board

is an inference engine which infers by a confidence level what the word announced is).

Response to Arguments

3.   Applicant's arguments with respect to claims 1-10, 17-19, 21-29, and 31 have

been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 03/05/04 regarding claim 11 have been fully

considered but they are not persuasive. Applicant argues that the prior art of record

does not teach 'analyzing using speech recognition...for the presence of tones'

Examiner respectfully disagrees as Solot uses an automatic speech recognition system

that includes speech recognition(units 5 and 11-13 of Fig.1) to analyze the received

audio information for the presence of tones(col.5 lines 31-62).

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph T Phan whose telephone number is 703-305-

3206. The examiner can normally be reached on M-TH 9:00-6:30, in every other

Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on 703-305-4895. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JTP
May 13, 2004

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600